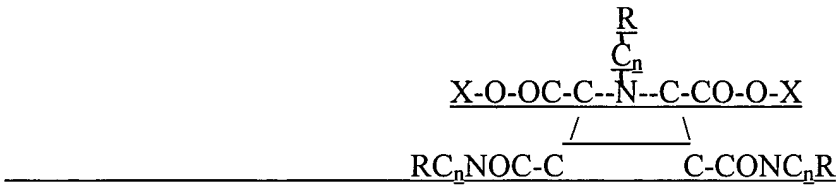
I claim:

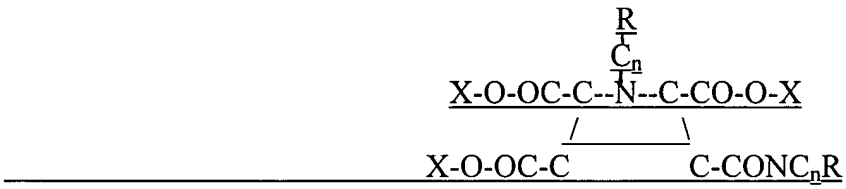
1. (Canceled).

2. (Currently Amended) A [The] chelating composition [of claim 1] in combination with fertilizer or fertilizer additives, said chelating composition comprising a modified iminodisuccinic acid, or a salt thereof, having one or more of the following formulas:

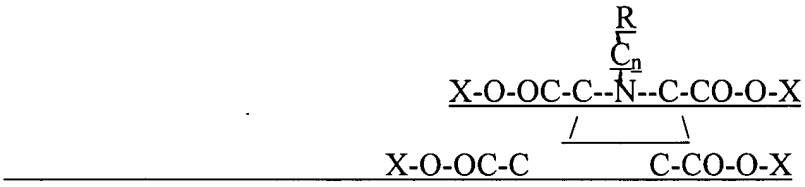
(a)



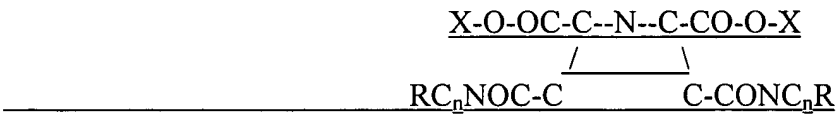
(b)



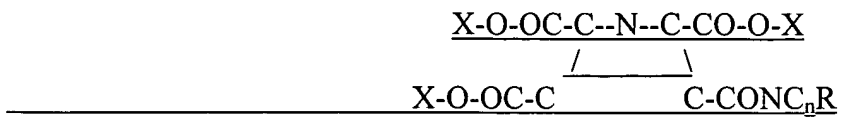
(c)



(d)



(e)



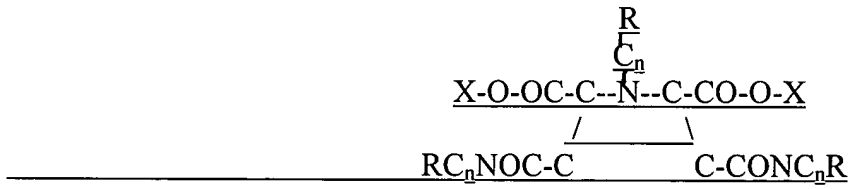
where X may be H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal;

where n may be 1 to 10; and

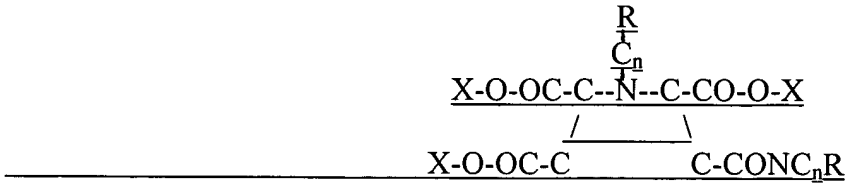
where R may be a Lewis base capable of donating a nonbonded pair of electrons.

3. (Currently Amended) A fertilizer comprising a [the] chelating composition [of claim 1] for application to soils, seeds or plants, said chelating composition comprising a modified iminodisuccinic acid, or a salt thereof, having one or more of the following formulas:

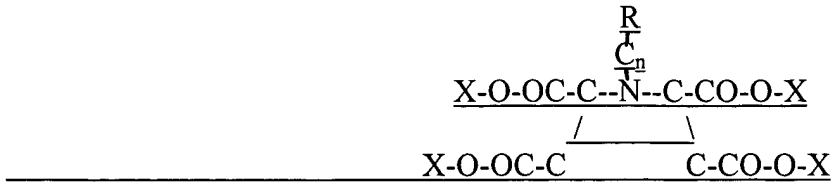
(a)



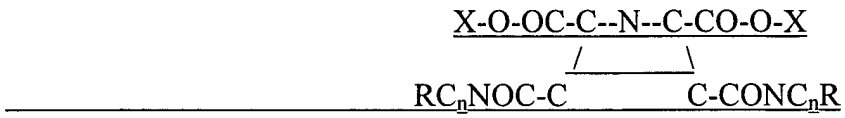
(b)



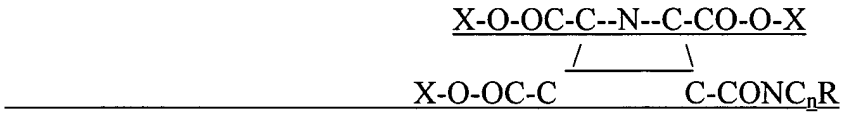
(c)



(d)



(e)



where X may be H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal;

where n may be 1 to 10; and

where R may be a Lewis base capable of donating a nonbonded pair of electrons.

4. (Canceled).

5. (Canceled).

6. (Canceled).

7. (Canceled).

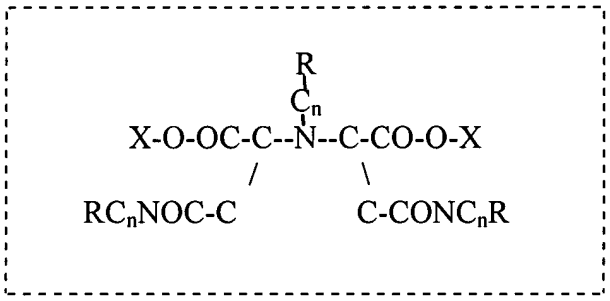
8. (Canceled).

9. (Canceled).

10. (Canceled).

11. (Canceled).

12. (Currently Amended) [The] A compound[s] [synthesized in claim 11] used as a fertilizer additive[s] comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



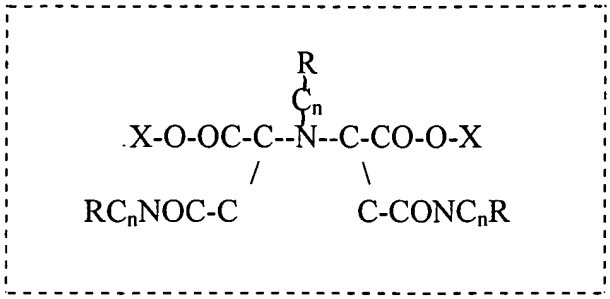
where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; n is 1 to 10, and R is a Lewis base capable of donating a nonbonded pair of electrons, wherein said compound is synthesized by a synthesis comprising the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N-polyfunctional acid common name amide; and

(b) adding water, Me(OH), and a second polyfunctional amine to said N-polyfunctional acid common name amide and allowing same to react to form an imino di N- polyfunctional acid common name amide.

13. (Currently Amended) [The] A compound[s] [synthesized in claim 11] used as a chelating agent[s] in a concentration[s] of $1/10^{a}$ to 1 part, where a is less then 10, or 1.0 x

10^{-9} Molar to 3Molar, wherein said compound comprises at least one poly functional substitution on iminodisuccinic acid having the following formula:

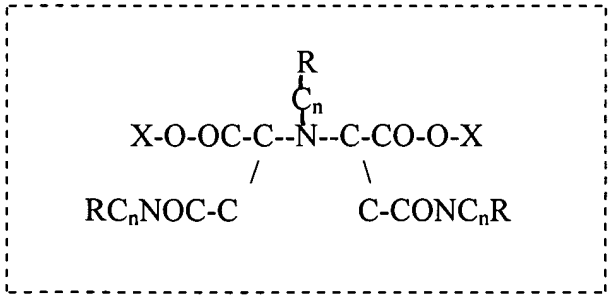


where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; n is 1 to 10, and R is a Lewis base capable of donating a nonbonded pair of electrons, and wherein said compound is synthesized by a synthesis comprising the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N-polyfunctional acid common name amide; and

(b) adding water, Me(OH), and a second polyfunctional amine to said N-polyfunctional acid common name amide and allowing same to react to form an imino di N- polyfunctional acid common name amide.

14. (Currently Amended) [The] A compound[s] [in claim 11] used for application to soils, seed, or plants, wherein said compound comprises at least one poly functional substitution on iminodisuccinic acid having the following formula:



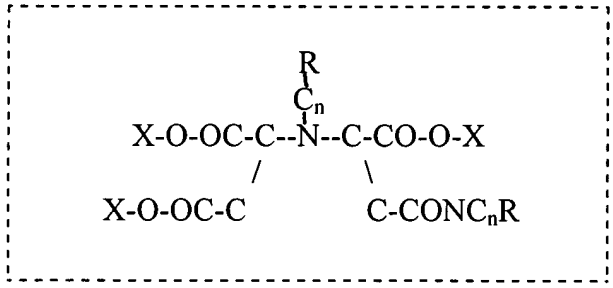
where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; n is 1 to 10, and R is a Lewis base capable of donating a nonbonded pair of electrons, and wherein said compound is synthesized by a synthesis comprising the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N-polyfunctional acid common name amide; and

(b) adding water, Me(OH), and a second polyfunctional amine to said N-polyfunctional acid common name amide and allowing same to react to form an imino di N- polyfunctional acid common name amide.

15. (Canceled).

16. (Currently Amended) [The] A compound[s] [synthesized in claim 15] used as a fertilzer additive[s] comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:

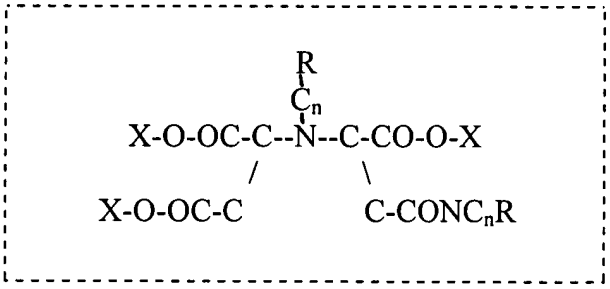


where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts, n is.1 to 10, R is a lewis base capable of donating a nonbonded pair of electrons, and Me is selected from the alkali metals, and wherein the synthesis of said compound comprises the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N- polyfunctional acid common name amide; and

(b) adding to said N- polyfunctional acid common name amide, water, a second polyfunctional amine, an acid anhydride or lactone, a Me (OH), and allowing same to react to form said compound.

17. (Currently Amended) [The] A compound[s] [synthesized in claim 15] used as a chelating agent[s] in a concentration[s] of $1/10^{a}$ to 1 part, where a is less then 10, or 1.0×10^{-9}Molar to 3Molar, said compound comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:

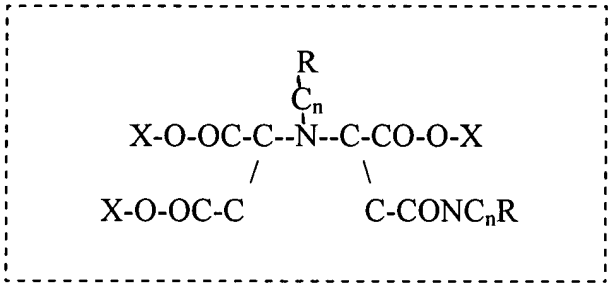


where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts, n is.1 to 10, R is a lewis base capable of donating a nonbonded pair of electrons, and Me is selected from the alkali metals, wherein the synthesis of said compound comprises the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N- polyfunctional acid common name amide; and

(b) adding to said N- polyfunctional acid common name amide, water, a second polyfunctional amine, an acid anhydride or lactone, a Me (OH), and allowing same to react to form said compound.

18. (Currently Amended) [The] A compound[s] [in claim 15] used for application to soils, seed, or plants, said compound comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



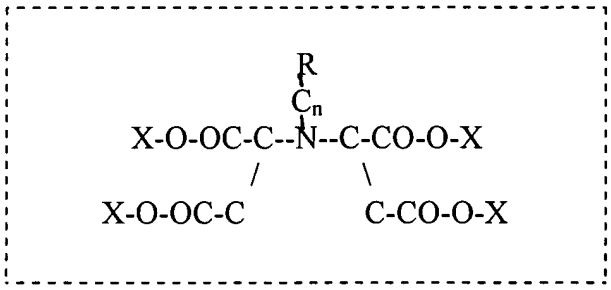
where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts, n is.1 to 10, R is a lewis base capable of donating a nonbonded pair of electrons, and Me is selected from the alkali metals, wherein the synthesis of said compound comprises the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N- polyfunctional acid common name amide; and

(b) adding to said N- polyfunctional acid common name amide, water, a second polyfunctional amine, an acid anhydride or lactone, a Me (OH), and allowing same to react to form said compound.

19. (Canceled).

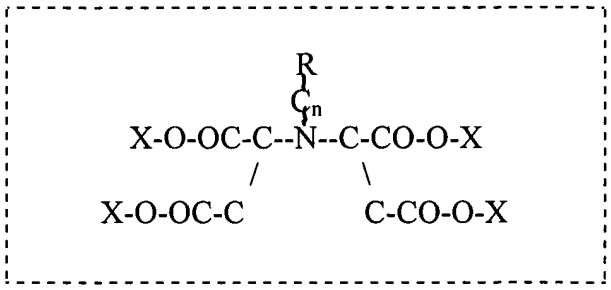
20. (Currently Amended) [The compounds synthesized in claim 19 used as] A fertilizer additive[s] comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts;, where n is 1 to 10; where R is a Lewis base capable of donating a nonbonded pair of electrons, wherein the synthesis of said fertilizer additive comprises the steps of :

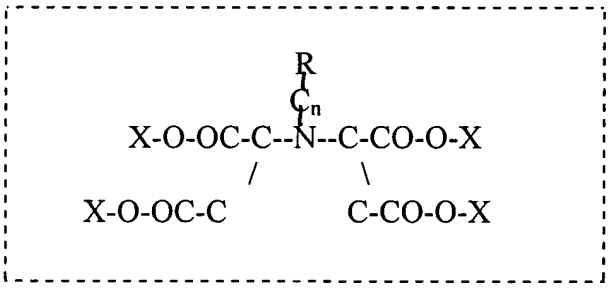
adding maleic anhydride or malic acid to Me (OH) + polyfunctional amine + water, and allowing same to react to form the N, N-disuccinicamino(:functional group).

21. (Currently Amended) [The compounds synthesized in claim 19 used as] A chelating agent[s] in a concentration[s] of $1/10^{a}$ to 1 part, where a is less than 10, or, or 1.0×10^{-9} Molar to 3 Molar, wherein said chelating agent comprises at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts; where n is 1 to 10; where R is a Lewis base capable of donating a nonbonded pair of electrons, and wherein the synthesis of said chelating agent comprises the steps of : adding maleic anhydride or malic acid to Me (OH) + polyfunctional amine + water, and allowing same to react to form the N, N-disuccinicamino(:functional group).

22. (Currently Amended) [The] A compound[s] [in claim 19] used for application to soils, seed, or plants comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:

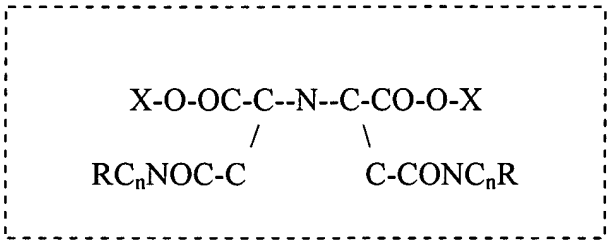


where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts;, where n is 1 to 10; where R is a Lewis base capable of donating a nonbonded pair of electrons, wherein the synthesis of said compound comprises the steps

of : adding maleic anhydride or malic acid to Me (OH) + polyfunctional amine + water, and allowing same to react to form the N, N-disuccinicamino(:functional group).

23. (Canceled).

24. (Currently Amended) [The compounds synthesized in claim 23 used as] A fertilizer additive[s] comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



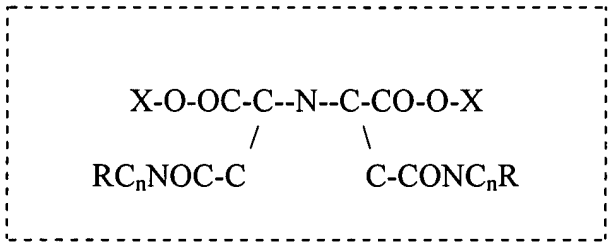
where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts; where n is 1 to 10, where R is a Lewis base capable of donating a nonbonded pair of electrons; wherein the synthesis of said fertilizer additive comprises the steps of :

(a) adding acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form a N- polyfunctional acid common name amide; and

(b) adding to said N- polyfunctional acid common name amide, water + ammonia + Me(OH), and allowing same to react to form an N,N- amino polyfunctional acid common name amide.

25. (Currently Amended) [The compounds synthesized in claim 23 used as] A chelating agent[s} in a concentration[s] of $1/10^{a}$ to 1 part, where a is less then 10, or 1.0×10^{-9} Molar

to 3 Molar, said chelating agent comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:

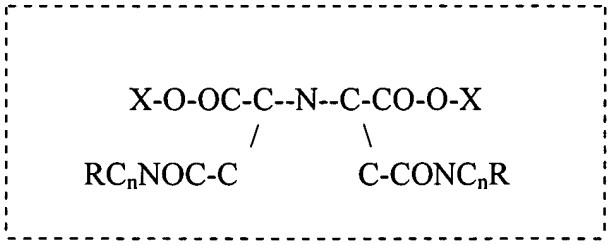


where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts; where n is 1 to 10, where R is a Lewis base capable of donating a nonbonded pair of electrons; and wherein the synthesis of said chelating agent comprises the steps of :

(a) adding acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form a N- polyfunctional acid common name amide; and

(b) adding to said N- polyfunctional acid common name amide, water + ammonia + Me(OH), and allowing same to react to form an N,N- amino polyfunctional acid common name amide.

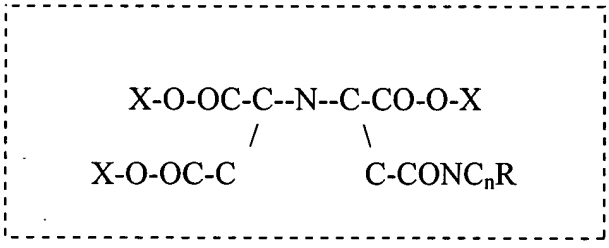
26. (Currently Amended) A [The] compound[s] [in claim 23] used for application to soils, seed, or plants comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts; where n is 1 to 10, where R is a Lewis base capable of donating a nonbonded pair of electrons; and wherein the synthesis of said compound comprises the steps of : (a) adding acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form a N- polyfunctional acid common name amide; and (b) adding to said N-polyfunctional acid common name amide, water + ammonia + Me(OH), and allowing same to react to form an N,N- amino polyfunctional acid common name amide.

27. (Canceled).

28. (Currently Amended) [The compounds synthesized in claim 27 used as] A fertilizer additive[s] comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



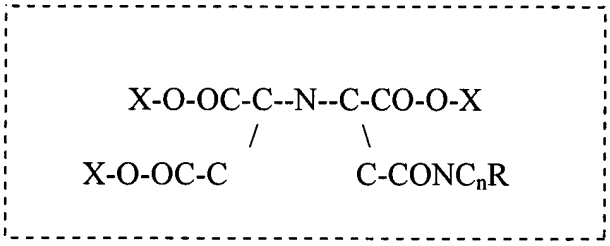
where X may be H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; where n may be 1 to 10; where R may be a lewis base capable of

donating a nonbonded pair of electrons; wherein the synthesis of said fertilizer additive comprises the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form an N- polyfunctional acid common name amide;

(b) adding to said N- polyfunctional acid common name amide, water, ammonia + maleic anhydride or maleic acid (salt) and allowing same to react to form said fertilizer additive.

29. (Currently Amended) [The compounds synthesized in claim 27 used as] A chelating agent[s] in a concentration[s] of $1/10^{a}$ to 1part, where a is less then 10, or 1.0×10^{-9} Molar to 3 Molar, said chelating agent comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



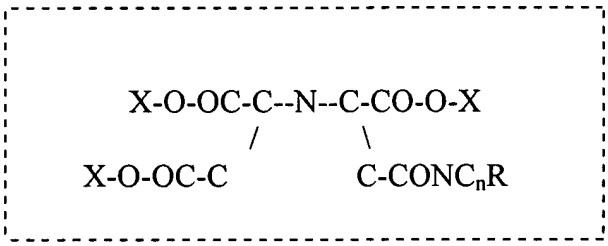
where X may be H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; where n may be 1 to 10; where R may be a lewis base capable of donating a nonbonded pair of electrons; wherein the synthesis of said chelating agent comprises the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form an N- polyfunctional acid common name amide;

(b) adding to said N- polyfunctional acid common name amide, water, ammonia +

maleic anhydride or maleic acid (salt) and allowing same to react to form said chelating agent.

30. (Currently Amended) [The compounds in claim 27] A compound used for application to soils, seed, or plants, said compound comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



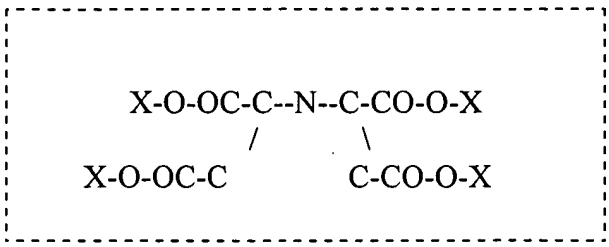
where X may be H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; where n may be 1 to 10; where R may be a lewis base capable of donating a nonbonded pair of electrons; wherein the synthesis of said compound comprises the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form an N- polyfunctional acid common name amide;

(b) adding to said N- polyfunctional acid common name amide, water, ammonia + maleic anhydride or maleic acid (salt) and allowing same to react to form said compound.

31. (Canceled).

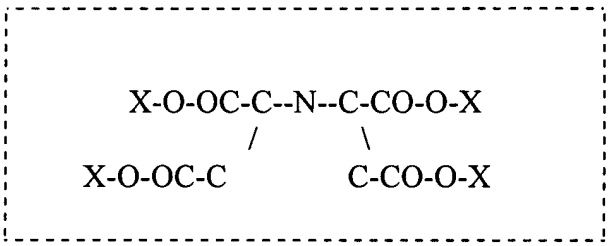
32. (Currently Amended) [The iminodisuccinic acid of claim 31 used as a] A fertilizer additive comprising iminodisuccinic acid having the following formula:



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salt.

33. (Canceled).

34. (Currently Amended) [The] An iminodisuccinic acid [of claim 31] used for application to soils, seed, or plants having the following formula:



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salt.

Respectfully submitted,

Date: October 27, 2004

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